

REPORT
CD NO.

DATE OF INFORMATION 1954

DATE DIST. 14 Jul 1954

NO. OF PAGES 2

SUPPLEMENT TO
REPORT NO.

THIS IS UNEVALUATED INFORMATION

SOURCE Izvestiya Akademii Nauk SSSR, Otdeleniye Khimicheskikh Nauk, No 1,
1954, p 199

A. V. NOVOSELOVA'S WORK ON THE CHEMISTRY OF BERYLLIUM

A. V. Novoselova was elected Corresponding Member of the Academy of Sciences USSR, in the specialty of general and inorganic chemistry, at a meeting of the Department of Chemical Sciences of the Academy held on 19-20 October 1953.

Novoselova has concentrated particularly on work dealing with the chemistry of rare elements. She has carried out extensive research on the chemistry of beryllium and its compounds. In the course of this work, she investigated the interaction of silicon fluoride and sodium fluoro-silicate with beryllium oxide at high temperatures. Application of thermal analysis to the study of the system consisting of sodium fluoride and beryllium fluoride and X-ray investigation of the phases formed by this system enabled Novoselova to establish the existence of the compound $\text{NaF} \cdot 2\text{BeF}_2$, which was not known until then. She also established the existence of polymorphic modifications of sodium fluoberyllate and beryllium fluoride and of a new modification of anhydrous beryllium fluoride which crystallizes in the hexagonal system. Novoselova has conducted extensive research on ternary systems consisting of water, beryllium fluoride, and fluorides of other metals. In almost all of the ternary systems studied, new compounds not described before were discovered. The results of the work done by Novoselova in this field contributed to the understanding of leaching (extraction) processes.

In addition to beryllium fluoride and its derivatives, Novoselova has also subjected to study other beryllium salts, particularly sulfates. She investigated for that purpose the following water-salt systems formed by sulfates of other metals [with beryllium sulfate?]: two ternary systems, one quaternary system, and one quinary system. By carrying out this work, very valuable data were obtained which characterize a number of new double sulfates.

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Systems which characterize the mutual solubility of beryllium chloride and of other chlorides in water were also studied. The results obtained in this work considerably extend our knowledge of complex and double compounds formed by beryllium salts. Tensimetric investigation of sulfates and nitrates of beryllium was carried out by Novoselova in the course of this work.

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